



# **PCB CAULKING REMEDIATION PLAN**

## **CITY SQUARE DEMOLITION AND ENABLING FORMER WORCESTER COMMON OUTLET MALL**

### **WORCESTER, MA**

Prepared by

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NASDI, LLC  
1365 Main Street  
Waltham, MA

Revised January 24, 2011

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## **1.0 SUMMARY**

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This work plan is submitted for the removal and disposal of PCB caulking in joints that include expansion joints, cracks, lines, and any other breaks in the garage floor and walls located at the garage of the Former Worcester Common Outlet located in Worcester, MA. A total estimated quantity of 90,000 linear feet is anticipated to be removed which is separated into three areas. The North Area contains an estimated amount of 8,184 LF, the Center Core Area contains an estimated amount of 33,759 LF and the South Area contains an estimated amount of 48,057 LF. This plan does not include removal of caulk from the roof level of the garage as this caulk did not contain PCB's. PCB caulking will be removed and adjacent surfaces decontaminated within regulated work areas. The adjacent concrete has been determined by the Owner's Consultant to not be contaminated; therefore no removal of the concrete is required. The scope of PCB caulking removal is defined in the specifications as well as this work plan.

Method of removal shall involve various types including caulking cutters and saw cutters. The methods are further discussed in 3.1.

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## **2.0 REGULATIONS, PERMITS, AND QUALIFICATIONS**

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NASDI, LLC/YES shall obtain all permits necessary to execute work conducted at the Former Worcester Common Outlet located in Worcester, MA. NASDI, LLC/YES shall adhere to all applicable federal, state, and local rules and regulations including, but not limited to, those from the EPA (related to Contractor Work Plan), the Massachusetts Department of Environmental Protection, the U.S. Occupational Safety and Health Administration (OSHA), and the Worcester Fire Department.

NASDI, LLC/YES shall also conform to all stipulations and permits identified in the contract bid documents, including any conditions set forth in the EPA approval. Where a conflict arises between regulations, NASDI, LLC/YES shall adhere to the most stringent regulation.

NASDI, LLC/YES shall also confer with Consigli and URS to resolve any conflict between the project plans and the remediation procedures.

## **2.1 FIRE SAFETY AND EMERGENCY ACTION PLANS**

NASDI, LLC/YES has prepared an emergency action and fire prevention plans that are fully compliant with all applicable regulations. This plan includes:

- Emergency escape procedures and routes;
- The procedure for announcing emergencies;
- The procedures to account for all employees after evacuation;
- The rescue and medical duties of personnel;
- A list of all major workplace fire hazards;
- The names and/or job titles of people responsible for the maintenance of the fire prevention equipment;
- The names and/or job titles of people to be contacted for information about the job.

## **2.2 STANDARD OPERATING PROCEDURES**

NASDI, LLC/YES has prepared a written work plan and health and safety plan for abatement work to be performed at the Former Worcester Common Outlet located in Worcester, MA. The purpose of the plan is to ensure maximum protection of workers and visitors from PCB exposure, and to minimize/prevent the release of PCBs or PCB-laden dust into the environment. The procedures include, but are not limited to the following:

- Engineering controls and work practices to minimize airborne contamination in the work area, and to prevent the spread of such contamination outside the work area.

These controls and practices instituted during abatement activities are designed to keep workers' exposures to PCBs below the permissible exposure limit and ensure no release of PCBs from the work area.

- Specifications regarding containment processes to prevent the release of abatement debris from the work area.
- Specifications for sufficient and proper personal protective equipment (PPE) and respiratory protection equipment for entrance into the work space from the outside, as may be required by OSHA regulations.
- Specifications for safe work practices in the workplace and exclusion of eating, drinking, smoking, or in any way breaking the respiratory protection.
- Removal methods that minimize the amount of airborne dust generated from abatement activities.
- Specifications regarding end of work shift cleaning procedures.
- Specifications regarding the handling, storage, transport, and disposal of all appropriately classified PCB waste in a manner that minimizes exposure and that complies with federal, state, and local regulations regarding PCBs.
- Specifications identifying disposal sites for PCB waste.
- Specifications regarding contingency plans pertaining to accidental spills and/or contamination in the work area or outside the work area.
- Mandatory and proper use of decontamination facilities when exiting the work area.
- Directions regarding the cleaning of work areas following abatement procedures.
- Supervision of work by a competent person.

In addition, the specific procedures outlined in the Section 3.3 shall be followed.

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## **2.3 TRAINING AND CERTIFICATION**

All personnel performing abatement activities at the Former Worcester Common Outlet located in Worcester, MA will have all the required training, medical examinations, and respirator fit testing as specified by OSHA. NASDI, LLC/YES will have a competent supervisor/foreman at the job site at all times overseeing the work. Site-specific hazards and hazards associated with the handling and disposal of PCB products will be effectively communicated to the staff to minimize potential exposures. In addition, NASDI, LLC/YES will provide proper training and equipment for all safety-related issues. Appendix B contains copies of certifications.

## **3.0 SCOPE AND SCHEDULE**

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### **3.1 SCOPE**

The scope of work for the abatement project solely addresses specified PCB caulking removal and decontamination of adjacent surfaces, as defined in the specification and this work plan.

### **3.2 WORK SEQUENCE**

The work sequence consists of the following general elements:

- Construction of personal decontamination facilities, as required. Work areas will generally be demarcated by barrier tape with attached PCB Hazard signage and 10 mil reinforced polyethylene drop cloths.
- Temporary PCB bulk product waste storage.

- Following establishment of work areas, NASDI, LLC/YES will begin systematic removal of the joints (generally working from the top to the bottom of the building). NASDI, LLC/YES will use caulking cutters/saw cutting for removal, which will be lightly misted with wetting agent (50% polyoxyethylene and 50%polyoxyethylene ether, one ounce per 5 gallons of water) to minimize dust generated by the removal activities. Once caulking is all removed, adjacent concrete will be wiped down with Simply Green solution.
- Following decontamination of the concrete, NASDI, LLC/YES will request visual inspection by Consigli and certification of remediation will be based on visual clearance followed by concrete samples collected by URS.
- Following receipt of certification of remediation, NASDI, LLC/YES will remove the barrier tape, poly and signage within the work areas.
- NASDI, LLC/YES will package and label all PCB caulking for disposal of as PCB-containing waste.

NASDI, LLC/YES will supply all labor, materials, and equipment necessary to carry out the scope of work detailed in this document in a professional manner.

### **3.3 SPECIFIC WORK PLAN PROCEDURES**

Prior to beginning the task of caulk removal, NASDI, LLC/YES will select strategic areas of the garage and create appropriate removal, decontamination, and storage zones in accordance with applicable guidelines and the Project Specification. The work areas will be taped off and proper signage will be installed to keep other workers/visitors out. Poly sheeting & pop-up decons will be used to create decontamination zones as needed to perform the work. It is anticipated that multiple areas may be going at the same time which will require that pop-up decontamination facilities be present in multiple areas. Work area isolation and protection will consist of by barrier tape with attached PCB Hazard signage and 10 mil reinforced polyethylene drop cloths.



The following is a breakdown of the various options that will be used to perform the work the safest as well as most economical for the Owner, workers and public. No pilot testing shall be done as both methods will be used. Following establishment of removal work areas the following options will be utilize:

#### Option 1: Caulking Cutters

Caulking cutters; that work electrically; will vibrate the caulking material from the joints. This work is very labor intensive and requires workers to be on hands and knees. Slight misting of work will be performed to assist in controlling dust but minimizing water use. This method is more viable in the expansion joints.

Once all caulking is removed rags with Simple Green shall be used to wipe concrete surface to prepare for visual inspection.

#### Option 2: Saw Cutting

Saw cutting of concrete shall be used based on type of material (i.e. expansion joints) and will take place a few inches off of material and if possible at an angle to allow for ease of removal of caulking with some of concrete. This method will be used in most situations as caulking cutters only viable on wide expansion joints.

Once all caulking is removed rags with Simple Green shall be used to wipe concrete surface to prepare for visual inspection. In the event of a failing confirmatory test, under authorization from the Owner and the direction of the on-site URS representative, NASDI will perform additional concrete cutting beyond the original removal limits. Scarification methods will not be used.

**It should be noted that both methods noted above shall be used in various areas.**

All disposable products used in the removal procedures, including rags, poly sheeting, cleaning supplies, and vacuum bags will be handled as PCB contaminated waste and disposed of in a TSCA permitted facility. All PCB waste (bulk product and caulking remediation waste) will be packaged daily in DOT authorized drums, labeled and stored on-site at the same location as the remediation waste. The storage location for the waste shall be within a secured fenced area and shall be located in the South parking Lot and as shown on the attached drawing. All equipment utilized throughout the duration of this project will be decontaminated in accordance with the project specification and applicable TSCA regulations. Field equipment, including PPE, will be decontaminated or disposed of with other PCB waste shall be in accordance with 40 CFR 761.79(c)(2). Generally, PPE and other disposable items will be managed as PCB waste; movable items will be decontaminated using Simple Green. Since only the items that have contacted PCB surfaces will require decontamination, wiping with simple green soaked rag is expected to be sufficient. No liquid decontamination waste is expected to be generated. Rags will be disposed of with other PCB waste. Record keeping shall be in accordance with current regulatory standards.

### **3.4 SCHEDULE**

PCB removal work is anticipated to take place during daytime hours beginning once the plan is approved, and it is anticipated that the work will take a total of approximately 14-16 weeks to complete.

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## **4.0 UTILITIES**

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NASDI, LLC/YES will tie into existing electrical power on-site for the remediation work. Temporary water will be provided on-site consistent with the contract documents. NASDI, LLC/YES will distribute all needed water for abatement and cleaning activities.

### **4.1 WATER SYSTEMS**

All water systems running through the work area and not being used must be shut off at the source. For any system that must be left on, the location of a shut-off valve must be clearly marked on the emergency plan. Water systems used by the contractor should be consistent with Owners' requirements for the work activity.

### **4.2 ELECTRICAL SYSTEMS**

Any electrical systems that may pose a hazard during the abatement process will be shut down by Owner. The power must be locked out at the control panel, and those individuals that have the ability to reenergize the area must be in close contact with the contractor and the remediation staff. Ground-fault circuit interrupters must be used for all temporary power supplies and extension cords

### **4.3 EXISTING FACILITIES**

NASDI, LLC/YES will coordinate with Consigli & URS with regard to maintaining existing facilities for the planned work activities. The Center Core of the garage is scheduled to remain and shall be maintained.

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## **5.0 SITE PREPARATIONS**

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### **5.1 SITE PROTECTION**

In order to contain debris and to protect existing facilities and the environment during remediation of caulking, NASDI, LLC/YES shall create regulated areas for all remediation work. The regulated area, used in conjunction with the planned work methods shall serve to prevent dust and debris from the removal and surface cleaning operations from contaminating adjacent areas.

At the end of every work shift, NASDI, LLC/YES shall remove all visible debris from poly ground cover by HEPA-filtered vacuuming. If tears or rips occur in the poly ground cover, the poly may be repaired with duct tape, or removed and replaced with a new sheet, as warranted by the extent of the damage. The materials used to construct regulated areas will be disposed as remediation waste.

### **5.2 SITE ISOLATION**

During the abatement work, NASDI, LLC/YES will address security and access concerns as part of the project. NASDI, LLC/YES will employ dust control measures for all work. The Work Plan specifics in 3.3 address isolation of work areas.

### **5.3 WASTE CONTAINERS**

NASDI, LLC/YES shall obtain and locate the approved PCB waste containers on-site, in locations acceptable to the Owner and Consigli. The PCB waste containers (bulk product & remediation waste) shall consist of DOT approved drums and shall be clearly marked in accordance with state and federal regulations, to avoid confusion with ordinary waste containers.

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## **6.0 MATERIAL STORAGE AND HANDLING PROCEDURES**

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### **6.1 PCB BULK PRODUCT WASTE MATERIAL**

PCB bulk product waste (e.g., joint caulking) shall be handled in a manner that prevents the breakdown of these materials into fine dust or powders. These materials shall be removed whole, with minimal breakage whenever feasible.

Once removed, these materials shall be placed in the DOT approved drums by end of the shift. PCB waste and PCB-containing items shall be stored for disposal in accordance with 40 CFR 761.40 and 40 CFR 761.65. Containers shall be clearly marked as PCB-containing waste materials.

DOT approved drums will be marked with designations indicating that the PCB materials are contained therein, as stated in 40 CFR 761.65(c)(1). All PCB-contaminated materials disposed of will be non-liquid materials. In addition, poly sheeting shall be used to prevent spillage onto the floor of the storage area. When not in use, drums will remain covered by lids. All areas containing PCB waste must be secured at the end of the day. Any dried and brittle PCB bulk product wastes requires additional care, such as the use of a HEPA-filtered vacuum operating while removing the material, to prevent the inadvertent release of PCB dust or powder into the environment.

### **6.2 PCB REMEDIATION WASTE**

The primary PCB remediation waste generated by this abatement project will be PCB decontamination materials, porous and/or disposable tools and cleaning supplies, and personnel

protective equipment used by workers during decontamination and removal activities. These materials will be placed directly into lined containers for disposal.

## **7.0 DISPOSAL**

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Disposal of all waste shall be in accordance with applicable state and federal regulations and sent to a licensed facility that will receive and retain PCB bulk product waste and PCB remediation waste, in accordance with EPA regulations under 40 CFR 761.61 and 40 CFR 761.62. All PCB bulk product waste and PCB remediation waste removed from the site will be kept separate from other ordinary construction waste streams that the contractor may generate. Copies of all waste shipment records, certificates of disposal, and any other documentation will be provided to Owner as proof of proper disposal of waste. No changes have been made to the PCB Disposal Plan previously approved. All waste shall be disposed of at Wayne Landfill located in Belleville, Michigan.

PCB bulk product and PCB remediation wastes will be stored according to applicable EPA TSCA regulations. NASDI, LLC/YES shall ensure compliance with storage and marking requirements described in 40 CFR 761.40 and 40 CFR 761.65. NASDI, LLC/YES shall also ensure that no visible emissions of dust will occur during the disposal of PCB bulk product and PCB remediation wastes into appropriate disposal containers.

The PCB bulk product waste and PCB remediation waste will be disposed of in accordance with 40 CFR 761.62 and 40 CFR 761.61(b), respectively, at the approved landfill for such disposal. NASDI, LLC/YES shall submit the name of the landfill(s) with appropriate documentation to verify that it is capable of accepting PCB waste in accordance with these requirements, once a waste profile is generated by the landfill.

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If PCB bulk product waste requires TCLP analysis prior to disposal, as required by the disposal facility, sampling and analysis will generally be conducted in compliance with Subpart R of the TSCA regulations, or at equivalent frequencies.

## **8.0 DECONTAMINATION PROCEDURES**

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NASDI, LLC/YES employees performing the PCB caulking removal, sorting, and disposal work will use two stage decontamination facilities located at the entrance to the regulated work areas to remove contaminated PPE and to wash any exposed skin areas prior to leaving the regulated areas. Water and towels used in personal decontamination will be collected and disposed of as PCB contaminated.

## **9.0 HEALTH AND SAFETY**

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### **9.1 NASDI, LLC/YES HEALTH AND SAFETY PLAN**

The written Health and Safety plan details engineering controls, practices and procedures, protective equipment, and training that will be used to control and minimize exposures and has not been changed from what was previously submitted and approved.

### **9.2 OSHA REGULATIONS**

All applicable federal and state OSHA standards and regulations to ensure worker safety will be in effect during the abatement process. The following programs are addressed in NASDI's Health and Safety plan. This is not a comprehensive list of the required programs, and NASDI, LLC/YES is responsible for determining which programs apply and how best to implement the required programs.

- Fall Protection
- Personal Protective Equipment
- Lockout/Tagout
- Confined Spaces
- Machine Safety
- Ladder/Scaffolding Safety
- Electrical Safety
- Housekeeping (Slips, Trips, Falls)
- Injury Reporting
- First Aid
- HAZWOPER/HAZMAT

### **9.3 PUBLIC SAFETY**

NASDI, LLC/YES will ensure public safety during the abatement work as identified within this plan. NASDI, LLC/YES will implement work area isolation measures designed to protect workers, occupants, and the environment from the release of PCB-containing materials. This includes the use of HEPA shrouded equipment to collect fugitive emissions during the dust generating operations and isolation of work areas from outside areas.

Access to work areas will need to be limited to ensure that only authorized workers aware of the abatement project will be within the Site. Proper hygiene and decontamination procedures must be followed to limit the potential for transferring PCB remediation waste outside the work area.

## **10.0 FINAL APPROVAL AND ACCEPTANCE**

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Final approval of the remedial work will be given when the following conditions are met:



- The work has been completed in a professionally competent manner, as demonstrated by successful visual inspections described in PCB Caulking Remediation Plan.
- The visual inspection will be followed by confirmatory sampling by URS Corporation consistent with the December 3, 2010 EPA approval of the Modification to the PCB Cleanup and Disposal Work Plan.
- Failure of confirmatory samples will result in re-cleaning or if needed re-cutting until area passes.
- The Owner receives a completed and accurate waste manifest for every PCB waste container removed from the site's waste storage location.

The work will not be considered complete until Consigli & URS give final approval.



**NASDI**

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## **APPENDIX A**

## **CERTIFICATION**



# NASDI

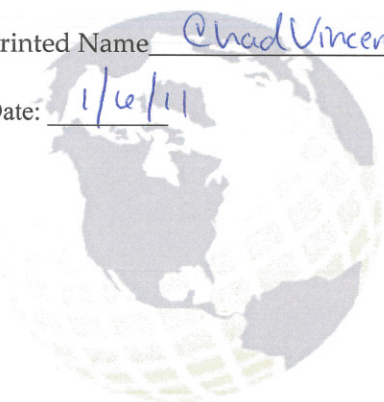
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I, Chad Vincent NASDI, LLC have read and understood the Modification to the PCB Cleanup and Disposal Approval letter dated December 3, 2010 addressed to Mr. Donald Birch from the United States Environmental Protection Agency. By signing this acknowledgment form, I hereby agree to all conditions set forth in this document, including but not limited to EPA requests and attachments. I fully understand that I must comply with all requirements set forth in this Notification Letter.

Signature Chad Vincent NASDI, LLC

Printed Name Chad Vincent NASDI, LLC

Date: 1/6/11



# NASDI

## **APPENDIX B**

### **WORKER DOCUMENTATION**

Prior To start of work, training certificates, medical forms and fit test shall be provided for workers that will be performing the identified work.

# HOISTING and PORTABLE ENGINEERS Local 4

*Apprenticeship Fund*

## ENGINEERS TRAINING CENTER

John J. Gaffny, Jr., Coordinator



December 7, 2010

Mr. Chad Vincent  
North American Site Developers  
1365 Main Street  
Waltham, MA 02451

Dear Mr. Vincent,

Mark St. Pierre of Amesbury Massachusetts attended a Hazmat Refresher class November 20, 2010. He is current and in compliance with his hazmat certification. Since all communications are sent to our National Hazmat office in West Virginia there is a time delay between when the journey members take the class and they receive their current sticker.

If you need further information, please do not hesitate to call my office at 781-821-0306.

Thank you for your understanding and cooperation.

Sincerely,

John J. Gaffny, Jr.  
Coordinator

JJG/mmd

**INSTITUTE FOR ENVIRONMENTAL  
EDUCATION, INC.**

16 Upton Drive Wilmington, MA 01887

PHONE (978) 658-5272

**IEE**

**IEE**

*This is to certify that*

**Mark Berardi**

*has attended the 8-hour course*

**Hazardous Waste Operations Refresher Training**

**pursuant to OSHA 29 CFR Part 1910.120**

October 22, 2010

Examination Date

10-5464-182-202182

Certificate Number

October 22, 2010

Course Dates

Course Location

Institute for Environmental Education, Inc.

16 Upton Drive

Wilmington, MA 01887

October 22, 2011

Expiration Date

*Wentworth*

Training Director

# INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

16 Upton Drive Wilmington, MA 01887

PHONE (978) 658-5272

# IEE

# IEE

*This is to certify that*

**Patrick McDonough**

*has attended the 8-hour course*

## **Hazardous Waste Operations Refresher Training**

**pursuant to OSHA 29 CFR Part 1910.120**

October 22, 2010

Examination Date

10-5464-182-234852

Certificate Number

October 22, 2010

Course Dates

Course Location

Institute for Environmental Education, Inc.

16 Upton Drive

Wilmington, MA 01887

October 22, 2011

Expiration Date

*Wentworth*

Training Director



# INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

16 Upton Drive Wilmington, MA 01887

PHONE (978) 658-5272

# IEE

# IEE

*This is to certify that*

**Robert W Silva**

*has attended the 8-hour course*

## **Hazardous Waste Operations Refresher Training**

**pursuant to OSHA 29 CFR Part 1910.120**

October 22, 2010

Examination Date

10-5464-182-227947

Certificate Number

October 22, 2010

Course Dates

Course Location

Institute for Environmental Education, Inc.

16 Upton Drive

Wilmington, MA 01887

October 22, 2011

Expiration Date

*Wentworth*

Training Director

**APPENDIX C**

**SIMPLE GREEN INFORMATIONIMPLE GREEN  
INFORMATION**

**Section 1: PRODUCT & COMPANY IDENTIFICATION**

**Product Name:** Simple Green® All-Purpose Cleaner  
Simple Green® Scrubbing Pad  
**Additional Name:** Simple Green® Concentrated Cleaner/Degreaser/Deodorizer

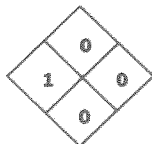
**Manufacturer's Product Code Numbers:** \*Please refer to page 4

**Company:** Sunshine Makers, Inc.  
15922 Pacific Coast Highway  
Huntington Harbour, CA 92649 USA  
**Telephone:** 800-228-0709 • 562-795-6000 **Fax:** 562-592-3830  
**Emergency Phone:** Chem-Tel 24-Hour Emergency Service: 800-255-3924

**Use of Product:** An all purpose cleaner and degreaser used diluted in water for direct, spray and dip tank procedures. Scrubbing pad is used with water for manual scrubbing applications. Both are for cleaning water-safe surfaces.

**Section 2: HAZARDS IDENTIFICATION**

**Emergency Overview:** CAUTION. Mild eye irritant.  
Simple Green® is a dark green liquid with a sassafras odor. Scrubbing Pad is a green fibrous rectangle.



HMIS Rating:  
Health = 1 = slight  
Fire = 0  
Reactivity, and Special = 0 = minimal

**Eye Contact:** Mild Eye Irritant.  
**Skin Contact:** No adverse effects expected under typical use conditions. Prolonged exposure may cause dryness. Under this condition, use of gloves or skin moisturizer after washing may be indicated.  
**Ingestion:** May cause stomach or intestinal upset if swallowed (due to deterative properties.)  
**Inhalation:** No adverse effects expected under typical use conditions. Adequate ventilation should be present when using Simple Green® over a prolonged period of time. Open windows or ventilate via fan or other air-moving equipment if necessary.  
**Carcinogens:** No ingredients are listed by OSHA, IARC, or NTP as known or suspected carcinogens.  
**Medical Conditions:** No medical conditions are known to be aggravated by exposure to Simple Green®. Dermal-sensitive users may experience mild but reversible reactions.  
**UN Number:** Not Required **Dangerous Goods Class:** Non-hazardous

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

The only ingredient of Simple Green® with established exposure limits is undiluted 2-butoxyethanol (<4%) (Butyl Cellosolve; CAS No. 111-76-2) [*1% for Scrubbing Pad*]; the ACGIH TLV-TWA is 20 ppm (97 mg/m<sup>3</sup>). Based upon chemical analysis, Simple Green® contains no known EPA priority pollutants, heavy metals or chemicals listed under RCRA, CERCLA, or CWA. Analysis by TCLP (Toxicity Characteristic Leaching Procedure) according to RCRA revealed no toxic organic or inorganic constituents.

All components of Simple Green® are listed on the TSCA Chemical Substance Inventory.  
This product does not contain any ingredients covered by the provisions of 29 CFR 1910.1200.

**Section 4: FIRST AID MEASURES**

- Eye Contact:** Reddening may develop. Immediately rinse the eye with large quantities of cool water; continue 10-15 minutes or until the material has been removed; be sure to remove contact lenses, if present, and to lift upper and lower lids during rinsing. Get medical attention if irritation persists.
- Skin Contact:** Minimal effects, if any; rinse skin with water, rinse shoes and launder clothing before reuse. Reversible reddening may occur in some dermal-sensitive users; thoroughly rinse area and get medical attention if reaction persists.
- Swallowing:** Essentially non-toxic. Give several glasses of water to dilute; do not induce vomiting. If stomach upset occurs, consult physician.
- Inhalation:** Non-toxic. Exposure to concentrate may cause mild irritation of nasal passages or throat; remove to fresh air. Get medical attention if irritation persists.

**Section 5: FIRE FIGHTING MEASURES**

**Simple Green® is stable, not flammable, and will not burn. No special procedures required.**

Flash Point/Auto-Ignition: Not flammable.  
Flammability Limits: Not flammable.

Extinguishing Media: Not flammable/non-explosive.  
Special Fire Fighting Procedures: None required.

**Section 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Avoid contact with eyes. Do not rub eyes with hands during cleanup. No special precautions for dermal contact are needed. Wash hands thoroughly after cleaning up spill or leak.

**Method for cleaning up:** Recover usable material by convenient method, residual may be removed by wipe or wet mop. If necessary, unrecoverable material may be washed to drain with large quantities of water.

**Section 7: HANDLING AND STORAGE**

No Special precautions are required. **This product is non-hazardous for storage and transport according to the U.S. Department of Transportation Regulations.** Simple Green® requires no special labeling or placarding to meet U.S. Department of Transportation requirements.

**UN Number:** Not Required

**Dangerous Goods Class:** Non-hazardous

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Exposure Limits:** The Simple Green® formulation presents no health hazards to the user when used according to label directions for its intended purposes. Mild skin and eye irritation is possible (please see Eye contact and Skin contact in section IV.) No special precautionary measures required under normal use conditions.
- Ventilation:** No special ventilation, precautions or respiratory protection is required during normal use. Large-scale use indoors should provide an increased rate of air exchange.
- Human Health Effects or Risks From Exposure:** Adverse effects on human health are not expected from Simple Green®, based on 20 years of use of Simple Green® without reported adverse health incidence in diverse population groups, including extensive use by inmates of U.S. Federal prisons in cleaning operations.
- Eye protection:** Simple Green® is a mild eye irritant; mucous membranes may become irritated by concentrate. Eye protection not generally required. Wash hands after using wipes.
- Skin protection:** Simple Green® is not likely to irritate the skin in the majority of users. Repeated daily application to the skin without rinsing, or continuous contact on the skin may lead to temporary, but reversible, irritation. Rinse completely from skin after contact.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION – continued –

**General hygiene conditions:** There are no known hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common good industrial hygiene practices:

- Avoid breathing vapor or mist.
- Avoid contact with eyes.
- Wash thoroughly after handling and before eating, drinking, or smoking.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance &amp; Odor:</b> Cleaner is a dark green liquid, pad is a fibrous green matrix; both exhibit a sassafras odor.				
<b>Specific Gravity:</b>		1.010 ± 0.010	<b>Vapor Pressure:</b>	18 mm Hg @ 20°C; 23.5 mmHg @ 26°C
<b>Evaporation:</b>		>1 (butyl acetate = 1)	<b>Vapor Density:</b>	1.3 (air = 1)
<b>Water Solubility:</b>		100%	<b>Density:</b>	8.5 lbs/gallon
<b>Boiling Point:</b>		100.6°C (212°F)	<b>pH:</b>	9.5 ± 0.3
<b>Ash Content:</b>		At 600°F: 1.86% by weight	<b>Nutrient Content:</b> Phosphorus: 0.3% by formula Nitrogen <1.0% by weight (fusion and qualitative test for ammonia) Sulfur: 0.6% by weight (barium chloride precipitation method)	
<b>Freezing Point:</b>		Approx -9 °C (16 °F) <i>If product freezes, it will reconstitute without loss of efficacy when brought back to room temperature and agitated.</i>		
<b>VOC Composite Partial Pressure:</b> 0.006 mmHg @ 20°C				
<b>Volatile Organic Compounds (VOCs):</b>		Cleaner meets CARB & BAAQMD regulations. Cleaner must be diluted 1:1 with water to Meet SCAQMD Rule 1171 & Rule 1122 VOC requirements for solvent cleaning operations. [Scrubber VOCs = 3.3% prior to dilution w/water]		
CARB Method 310	3.8%			
SCAQMD Method 313	2.8%			

## Section 10: STABILITY AND REACTIVITY

**Stability:** Stable  
**Materials to Avoid:** None known  
**Hazardous Decomposition Products:** None expected

## Section 11: TOXICOLOGICAL INFORMATION

Toxicology information is based on chemical profile of ingredients and extrapolation of data from similar formulas.

**Acute Toxicity:** Oral LD<sub>50</sub> (rat) >5 g/kg body weight\*  
Dermal LD<sub>50</sub> (rabbit) >2 g/kg body weight  
*\*Calculation from OECD series on testing and assessment number 33, Chapter 3.2*

**Eye Irritation:** Moderate/Mild reversible eye irritation may occur based on relevant laboratory studies. This potential is reduced by immediate rinsing of eyes in case of eye contact.

**Dermal Irritation:** Mild, reversible skin irritation may occur based on relevant laboratory studies. A 6-hour exposure to human skin under a patch did not produce irritation

**Repeat Exposure Via Skin Contact:** Based on relevant laboratory studies, no toxic effects are expected to be associated with daily skin exposures (with up to 2 g/kg/day tested for 13 weeks on rabbits). Skin irritation may, however, occur with repeated or prolonged exposures.

**Reproductive Effects Assessment:** Based on relevant laboratory studies (CD-1 mouse 18-week fertility assessment continuous breeding), no adverse effects on reproduction, fertility, or health of offspring are expected.

## Section 12: ECOLOGICAL INFORMATION

**Hazard to wild animals & aquatic organisms:** Low, based on toxicological profile.

**Biodegradability:** Readily biodegradable based on biodegradation profile.

PRO/FT CBT-AC 014-7 "Ready Biodegradability: Closed Bottle Test" OECD, and OECD 302B laboratory tests

**Environmental Toxicity Information:** It is important not to allow the runoff from cleaning into closed systems such as decorative ponds. Always protect closed systems with tarps or dikes if necessary.

## Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal laws. Dispose of used or unused product, and empty containers in accordance with the local, State, Provincial, and Federal regulations for your location. Never dispose of used degreasing rinsates into lakes, streams, and open bodies of water or storm drains.

## Section 14: TRANSPORT INFORMATION

This product is non-hazardous for transport according to the U.S. Department of Transportation Services

UN Number: Not required

Dangerous Goods Class: Non-hazardous

## Section 15: REGULATORY INFORMATION

\*Reportable components:

**All components are listed on:** EINECS and TSCA Inventory

**No components listed under:** Clean Air Act Section 112

**TSCA/TRI SARA Title III**

**Reporting:** This product contains 2-butoxyethanol (111-76-2, <4%) which is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 as Category N230 – Certain Glycol Ethers.

**RCRA Status:** Not a hazardous waste.

**CERCLA Status:**

No components listed

**CA PROP. 65 Status:** No components listed

## Section 16: OTHER INFORMATION

### PREPARER:

Questions about the information found on this MSDS should be directed to:

SUNSHINE MAKERS, INC. – TECHNICAL DEPARTMENT

15922 Pacific Coast Hwy. Huntington Harbour, CA 92649

Phone: 800/228-0709 [8am-5pm Pacific time, Mon-Fri]

Fax: 562/592-3830

Email:

infoweb@simplegreen.com

CAGE CODE 1Z575

GSA/FSS - CONTRACT NO. GS-07F-0065J

Scrubbing Pad GSA/BPA - CONTRACT NO. GS-07F-BSIMP

National Stock Numbers & Industrial Part Numbers:

Simple Green	Part Number	NSN	Size
	13012	7930-01-342-5315	24 oz spray (12/case)
	13005	7930-01-306-8369	1 Gallon (6/case)
	13006	7930-01-342-5316	5 Gallon
	13016	7930-01-342-5317	15 Gallon
	13008	7930-01-342-4145	55 Gallon
	13275	N/A	275 Gallon tote
Scrubbing Pad	10224	7930-01-346-9148	Each (24/case)

Retail Numbers:

Part Number	Size
13002	16 oz Trigger (12/case)
13005	1 Gallon (6/case)
13013	24 oz Trigger (12/case)
13014	67 oz / 2 L (6/case)
13033	32 oz Trigger (12/case)

part number is for both industrial and retail

\*\*International Part Numbers May Differ.

**DISCLAIMER:** The information provided with this MSDS is furnished in good faith and without warranty of any kind. Personnel handling this material must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of this material and the safety and health of employees and customers. Sunshine Makers, Inc. assumes no additional liability or responsibility resulting from the use of, or reliance on this information.



**APPENDIX D**

**PCB CAULKING CONTAINMENT LAYOUT**



**PCB SAMPLE LOCATIONS**  
AUGUST 2010

- WCP-#### CAULK SAMPLE LOCATION
- WCP-#### WHERE ADJACENT CONCRETE SAMPLES WERE COLLECTED
- ▲ WCCP-#### PAINT CHIP SAMPLE LOCATION

**Exterior Contaminant #1**

**Exterior Contaminant #2**

**Exterior Contaminant #3**

**CITY SQUARE DEVELOPMENT CO., LLC**  
**CITY SQUARE WORCESTER COMMONS**  
**FRONT STREET**  
**WORCESTER MASSACHUSETTS**  
**CAULK, CONCRETE AND PAINT**  
**SAMPLE LOCATIONS**  
**LEVEL 2**

**URS**  
300 Congress Ave  
Worcester, MA 01608  
TEL: (508) 853-2800  
FAX: (508) 853-2801  
WWW.URSCORPORATION.COM

DRAWN BY: JMB PROJECT NO.: 3374323 SHEET NO.:  
CHECKED BY: BJS SCALE: DATE:  
APPROVED BY: MMS DATE: 9/10

2 OF 6

● WCP-#### CAULK SAMPLE LOCATION  
○ WCP-#### CAULK SAMPLE LOCATION  
▲ WCCP-#### WHERE ADJACENT CONCRETE SAMPLES WERE COLLECTED PAINT CHIP SAMPLE LOCATION

Exterior Containment  
#1

Exterior Containment  
#2

Exterior Containment  
#3

CITY SQUARE DEVELOPMENT CO., LLC  
CITY SQUARE WORCESTER COMMONS  
FRONT STREET  
WORCESTER MASSACHUSETTS  
CAULK, CONCRETE AND PAINT  
SAMPLE LOCATIONS  
LEVEL 2

**URS**

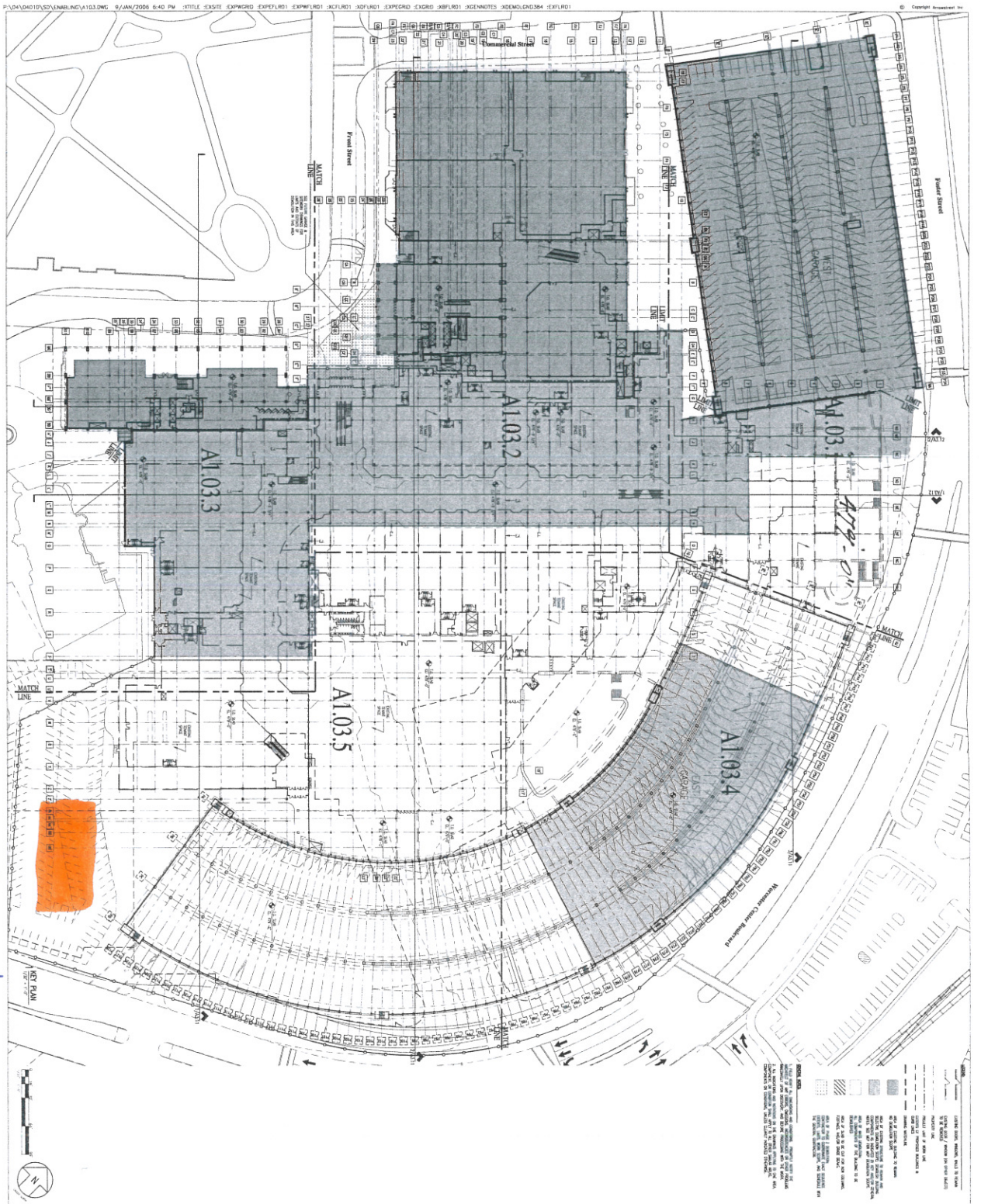
DRAWN BY: HAB	PROJECT NO.: 39743438	SHEET NO.: 2 OF 6
CHECKED BY: BJG	SCALE: NTS	
APPROVED BY: MMW	DATE: 9/10	

PLOTTED: 08/30/10 7:12PM BY: DENNIS BURKHOLDER  
 LAST SAVED: 08/30/10 12:52PM BY: DENNIS BURKHOLDER  
 DRAWING: 7: VACAD-PROJECT/DEWELEY INV-WORCESTER MA\PLANS\PCB CALUINGO SAMPLES LEVEL 2.DWG (B1 LEVEL GARAGE)

## **APPENDIX E**

### **WASTE STORAGE LOCATION**





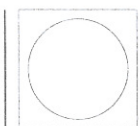
PCB caulking waste storage location =



CINISQUARE  
First Journal Hotel

Berkeley  
Investments  
Inc.

Construction  
Documents  
01/30/09



ARROWSTREET  
ARCHITECTS

URBAN DESIGN  
GRAPHICS AND INTERIORS  
114 THE SHORE BUILDING, SUITE 200  
SAN FRANCISCO, CA 94133  
WWW.ARROWSTREET.COM

Project No. 00101  
Client No. 00101  
Design No. 00101  
Date 01/30/2009

GROUND FLOOR  
EXISTING  
CONDITIONS  
& KEY PLAN

Scale: 1/32" = 1'-0"  
Drawing Number: A1.03